Welcome

Restoration Advisory Board Meeting

Robins Air Force Base

January 8, 2004

Restoration Advisory Board Meeting Robins Air Force Base

JANUARY 8, 2004

Theme:
Key Robins Initiatives in the Spotlight

Welcome and Program Introduction

Mr. Jim Harden

Community Co-Chair

Terms Used

- In-situ Chemical Oxidation – a restoration process in which chemicals are injected into the subsurface to enhance destruction of contaminants
- Monitored Natural Attenuation – a process of enhancing restoration by allowing natural biological processes present in the subsurface to proceed with careful monitoring and evaluation
- Oxidant – a class of chemicals that can enhance destruction of contaminants in the subsurface
- Performance Based Contracting – restoration contracting in which standards involve clear criteria; contractor methods to achieve standards are up to contractor, and payment is tied to attainment of performance standards

Terms Used

- Polynuclear Aromatic Hydrocarbons [PAHs] – a class of chemicals often encountered as contaminants at industrial-type sites
- Solid Waste Management Unit (SWMU) – a defined area recognized by Robins AFB and the regulatory agency where contaminants are being cleaned up
- Trichloroethylene (TCE) – a chlorinated solvent routinely used in industrial applications through the 1970s and now a contaminant of concern
- Volatile Organic Compounds (VOCs) – a class of chemicals that can be removed from groundwater by transfer to the vapor phase

Horse Pasture Site Restoration

Mr. Mark MacEwan, P.E., Tetra Tech

January 8, 2004

OVERVIEW

- Introduction
- What is Performance Based Contracting
- Overview of project
- Soil remediation
- Site groundwater remediation

INTRODUCTION

- Objective – restoration of soils and groundwater associated with the Horse Pasture Site

INTRODUCTION

- The Team
  - Robins AFB (PM – Fred Otto)
  - BEM System, Inc. (PM – John Nash)
  - Tetra Tech (PM - Mark MacEwan, P.E.)
  - GA EPD (PM - Mary Brown)

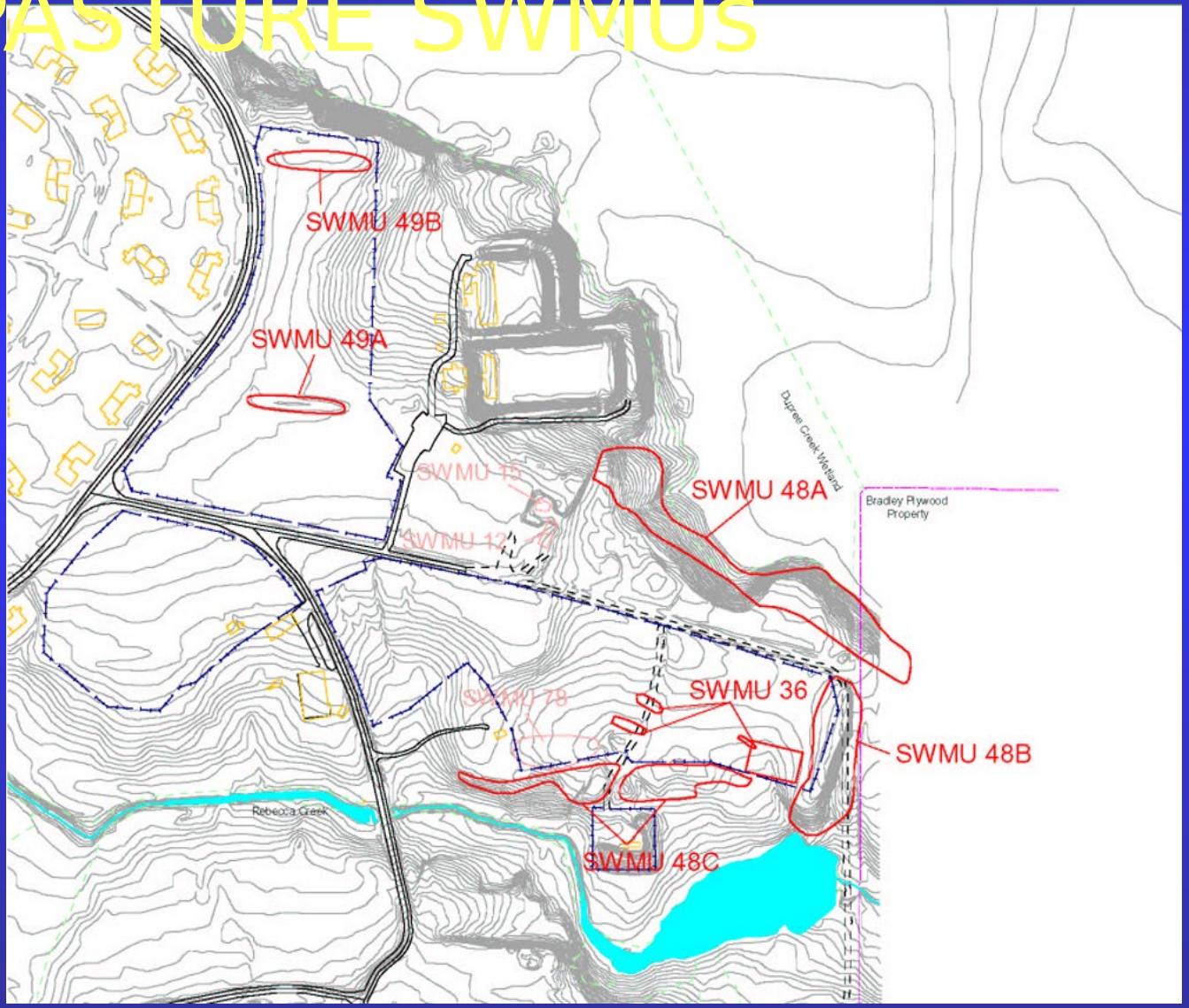
WHAT IS PERFORMANCE BASED CONTRACTING (PBC) ?

- Performance standards involving clear and mutually agreed upon criteria
- Instead of instructing a contractor “how” to cleanup a site, the PBC approach provides “what” the specific cleanup standard is and how the contractor achieves this standard is up to them
- Payment is tied totally to attainment of performance standards

WHAT IS PBC? (Continued)

- PBC provides DoD a mechanism for:
  - Cost savings
  - Acceleration cleanup time frames
  - Reduced project risk
  - Utilization of private sector lessons learned, innovative approaches, and remedial process optimization

LOCATION OF HORSE PASTURE SWMUs



SITE DESCRIPTION & HISTORY

- Horse Pasture Site – Used as disposal area, 1950’s to 70’s
- Based upon RCRA process divided into several solid waste management units (SWMUs)

SITE DESCRIPTION

- Focus of this PBC includes:
  - SWMU 36, trench disposal burn pit
    - VOCs, mostly chlorinated solvents, and metals
  - SWMU 48A, miscellaneous fill material
    - Metals [lead and arsenic], PAHs, one pesticide
  - SWMU 48B, miscellaneous fill material
    - Metals [lead and arsenic only]

SITE DESCRIPTION

- Focus of this PBC includes:
  - SWMU 48C, miscellaneous fill material
    - Metals [lead and arsenic], one PAH
  - SWMU 49, small arms firing range
    - Lead, one PAH
  - Site-wide groundwater (36, 48A, 48B, & 48C)
    - VOCs

RESTORATION APPROACH SUMMARY

- Corrective Action, Soil
  - Excavation, stabilization, and disposal as non-hazardous
- Corrective Action, Groundwater
  - Excavation (VOCs hotspots, SWMU 36)
  - In-situ Chemical Oxidation
  - Monitored Natural Attenuation

RESTORATION APPROACH - SOILS

- Further delineate soils
- Separate lead slag
- Stabilize soils
- Excavate soils
- Transport soils to disposal facility

RESTORATION APPROACH - SOILS

Excavation after blending under consideration

RESTORATION APPROACH - SOILS

Close-up of blending apparatus

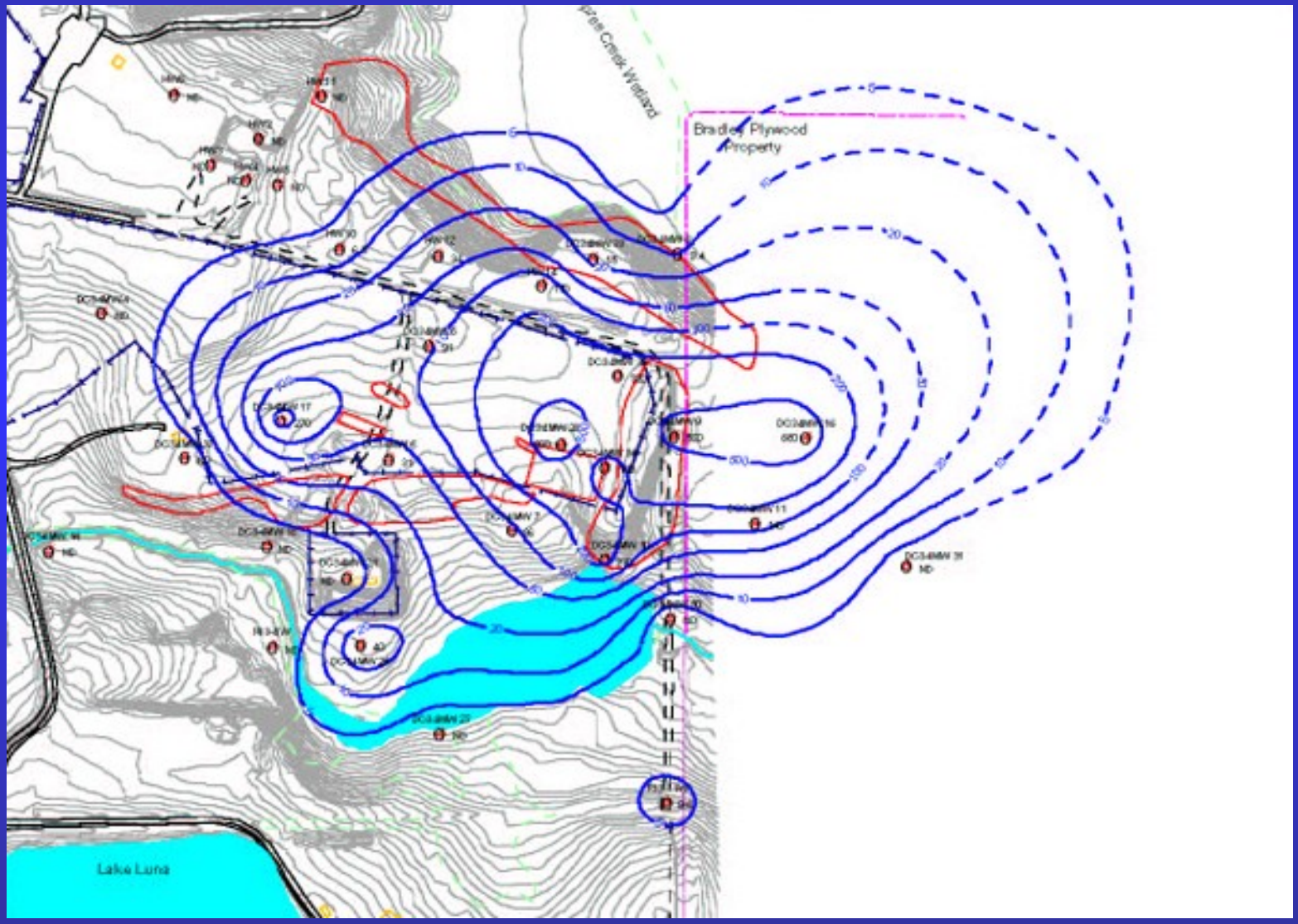
RESTORATION APPROACH - SOILS

Excavation during SWMU 78 Interim Measures

GROUNDWATER OVERVIEW

- Focus of corrective action, groundwater
  - VOCs, chlorinated solvents
  - Groundwater concerns impact SWMUs 36, 48A, 48B, 48C, and off-base into the Bradley Plywood property

TCE IN GROUNDWATER



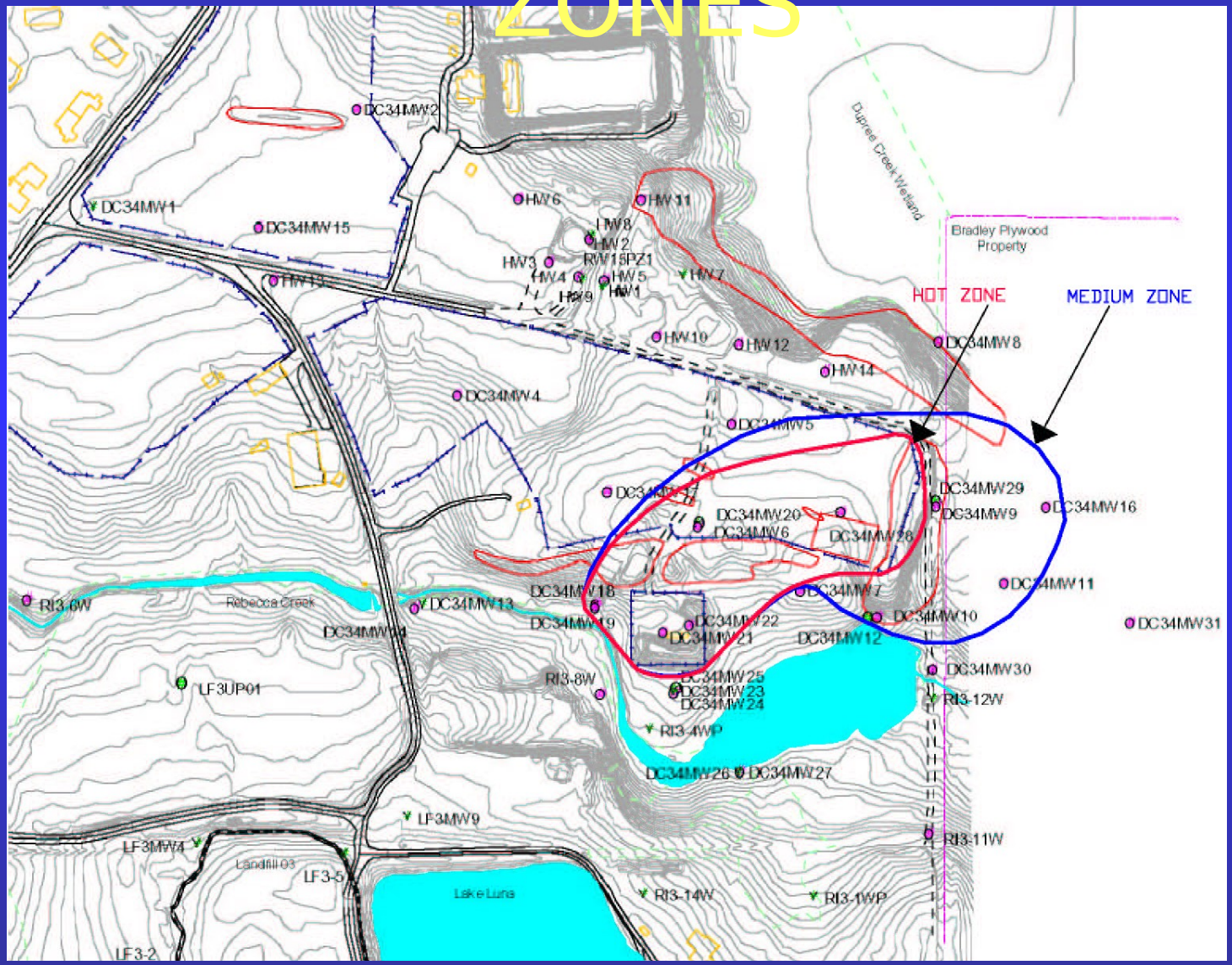
RESTORATION APPROACH - GROUNDWATER

- In-situ chemical oxidation
  - Conduct bench tests
  - Injections into “Hot” Zone
  - Monitor groundwater
  - Continue injections into “Hot” Zone
  - Injections into the “Medium” Zone

RESTORATION APPROACH – GROUNDWATER [CONTINUED]

- Continue to monitor groundwater
- Monitor natural attenuation in outlying areas
- Complete groundwater remediation
- No Further Action approval

HOT AND MEDIUM ZONES



RESTORATION APPROACH - GROUNDWATER

- In-situ Chemical Oxidation (ISCO) Technology… What is it and why use it ?
  - The injection of “oxidants” into contaminated groundwater
  - Typical oxidants are peroxide, sodium and potassium permanganate, and ozone
  - Rapid chemical reaction
  - Occurs in-situ so no generation of waste – contamination not transferred between media

RESTORATION APPROACH - GROUNDWATER

The Oxidant – Groundwater Reaction

Oxidant chemicals react with contaminants to produce non-harmful chemicals:

Contaminated Groundwater + Oxidant = Carbon Dioxide, Water, and Inorganic Chloride

PROJECT SCHEDULE

- FY 04:
  - Work Plan
  - Corrective Action Plan
  - Excavate and stabilize soils
  - Transport and dispose of soils
  - No Further Action approval on soil SWMUs
  - Begin “Hot” Zone groundwater injections

PROJECT SCHEDULE (CONTINUED)

- FY 05 through FY 09:
  - Continue “Hot” Zone injections
  - Begin groundwater injections in “Medium” Zone
  - Monitor groundwater remediation
  - CAP Progress Report
  - No Further Action approval in FY09

SUMMARY

- Performance-based contract in place
- Innovative technologies to be used
- Complete groundwater remediation
- No Further Action approval

AF Environmental Restoration Program

Mr. Kevin Long, WR-ALC/EMO

January 8, 2004

OVERVIEW

- Life at the Air Staff
- AF Restoration Program
- Restoration Tiger Team
- Program Future Plans and Goals
- Summary

LIFE AT THE AIR STAFF

- It’s not all Starbucks and sushi
- AF Secretariat
  - SAF -- Secretary of the AF
  - SAF/IE -- Assistant Secretary of the Air Force for Installations, Environment, and Logistics
  - SAF/IEE -- Deputy Assistant Secretary of the Air Force for Environment, Safety and Occupational Health

LIFE AT THE AIR STAFF

- AF Organization
  - AF -- Air Force Chief of Staff
  - AF/IL (MajGen Wetekam's next assignment if confirmed) -- Deputy Chief of Staff for Installation and Logistics
  - AF/ILE -- AF Civil Engineer
  - AF/ILEV -- AF Environmental Division
  - AF/ILEVR -- Restoration Branch

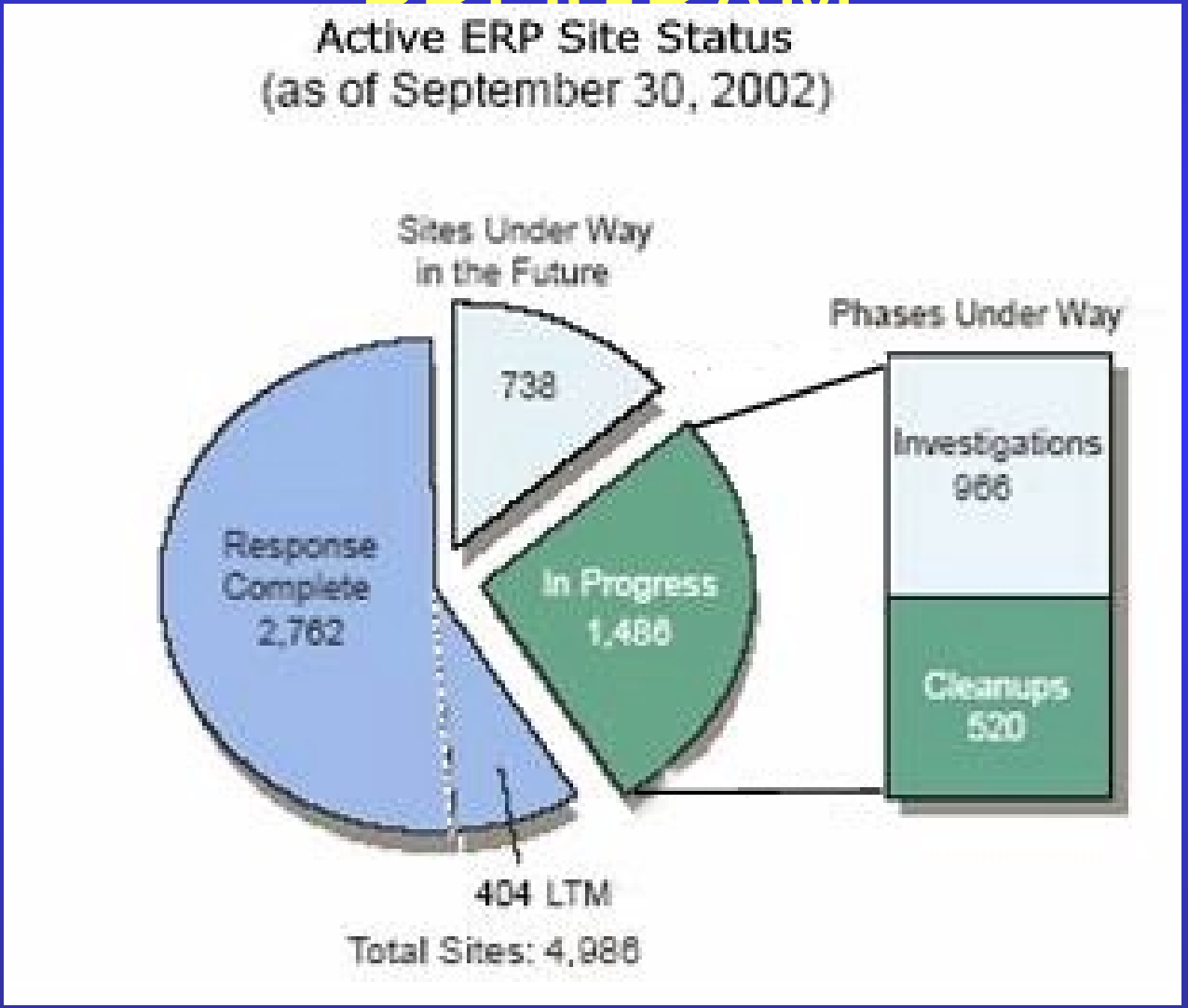
AF RESTORATION PROGRAM

- Almost 5,000 ERA sites in the AF
  - 42 ERA sites at Robins
- Over 1000 Areas of Concern
  - 0 active AOCs at Robins
- The AF has spent approximately $5B on cleanup to date
  - $153M at Robins

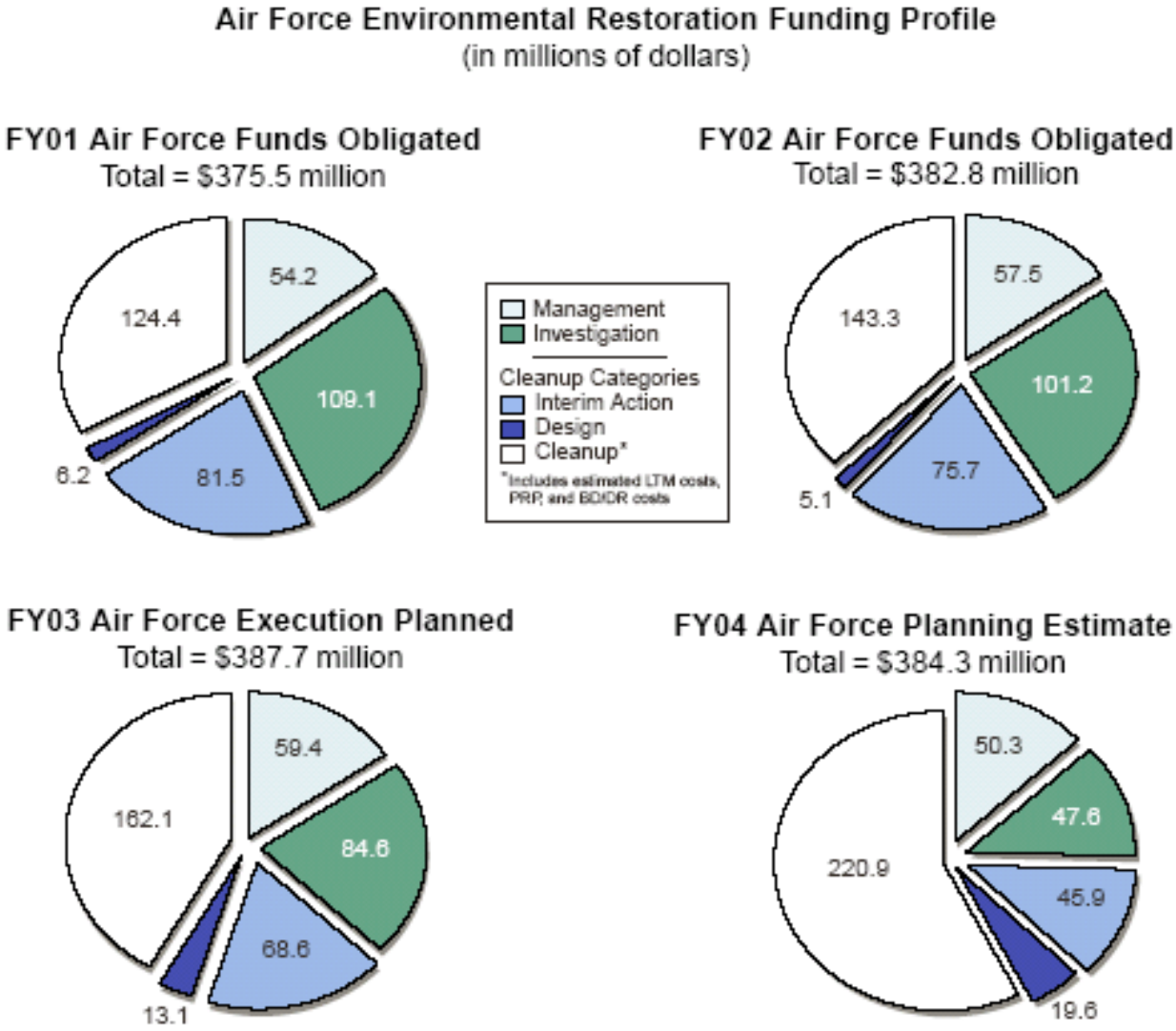
AF RESTORATION PROGRAM

- Estimated cost to complete AF cleanup program is $5.4B
  - $185M at Robins
- Completion date is beyond 2050
  - Robins will complete before 2035

AF RESTORATION PROGRAM



AF RESTORATION PROGRAM



RESTORATION TIGER TEAM

- Created as a response to SAF/IEE Audit Request
- Tasking by Col. Daly (AF/ILEV) to build team and respond to audit
- Over 40 people from across the AF including all MAJCOMs involved

RESTORATION TIGER TEAM

- Addressed five major concerns with AF Restoration Program and devised improvement strategy
  - Time and Cost to ROD
  - Personnel Retention -- Turnover resulted in program delays
  - Areas of Concern -- Over 1,000 sites had not been evaluated

RESTORATION TIGER TEAM

- Five major concerns [continued]
  - AF Restoration Information Management System (AFRIMS) -- Data was unreliable and wasn't suitable for decision making
  - Cost-to-Complete (CTC) -- Cost was large and increasing

PROGRAM OVERSIGHT

- Developed performance measures
- DSMOA policy and guidance
- AF-Wide benchmarks
  - Expedited processes
  - New technologies
  - Regional requirements
  - Issue resolution
- Track time and cost to ROD

PROGRAM FUTURE PLANS AND GOALS

- New restoration metrics have been implemented to bring management attention on problems
- AFRIMS data is being closely scrutinized
- A Restoration Report Card has been created
- MAJCOMs are required to undergo an annual program review

PROGRAM FUTURE PLANS AND GOALS

- Areas of Concern are required to be addressed by 2007
- Cost-to-Complete trend charts are required for all installations
- Performance based contracts are being emphasized as a means to lock in outyear cost

SUMMARY

- We have the best program in the Air Force
- None of the issues brought up by the audit or at AF program reviews are concerns at Robins
- The restoration team will continue to look for ways to remain at the top

LUMINOUS PAINT SHOP SURVEY

Capt. Steven Lange, 78 AMDS/SGPB

08 January 2004

OVERVIEW

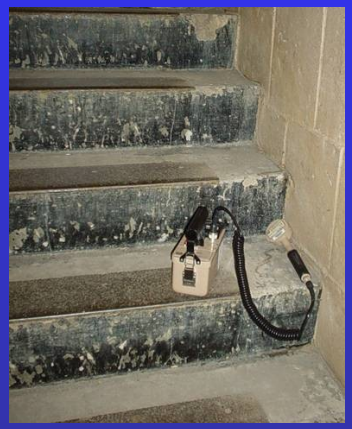
- Investigation
- Findings
- Initial Survey Results
- Summary

INVESTIGATION

- AF Surgeon directed investigation
- Proactive - based on findings at closed bases
- Investigation conducted by:
  - Local Bioenvironmental Engineers
  - AF Institute for Operational Health

FINDINGS

- Contaminated sink & drain
- Disconnected ventilation duct
- Other localized contamination
- Long-term study underway



INITIAL SURVEY RESULTS

- No health hazards to workers in building 158 due to the existence of residual radium contamination

- External radiation exposure levels are indistinguishable from natural background levels

INITIAL SURVEY RESULTS

- Radon concentrations are comparable to outdoor concentrations

- Workplace environment is safe with regards to external radiation levels and radon concentrations

SUMMARY

- Investigation
- Findings
- Initial Survey Results
- Long-term Study Results

New Business and Program Closing

Mr. Jim Harden

Community Co-Chair

Next RAB Meeting March 11, 2004

Please…

- Complete *meeting evaluation and feedback form* and either leave at your place or give it to Ms. Logue.
- Recycle your name tag and lanyard by leaving them at your place… We will collect and reuse them at the next RAB meeting.

Thank you!